→ CAFS FOR C9FMVU2

ESA's NEO Coordination Centre

Close approach fact sheet for asteroid C9FMVU2

The very small asteroid C9FMVU2 (MPC preliminary designation not available yet) will have a close encounter with Earth on 07 September 2023. The estimated impact probability is: 0

Fly-by date	2023-09-07
Closest approach time	14:24:50 UTC (± 12 s)
Fly-by distance from Earth surface	4002 km, 0.01 Lunar Distances (± 11 km)
Fly-by speed	13.6 km/s
Size range	0.9-2 m
Discovery date	2023-09-07
Discovery site	Mt. Lemmon Survey

All error bars quoted in this table correspond to one standard deviation.

Orbit information

As the approach distance of the nominal trajectory to the Earth is relatively small, changes in its orbital elements due to the Earth gravity are noticeable.

Date before and after fly-by	Orbital period (year/day)	Aphelion distance (au)	Perihelion distance (au)	Eccentricity	Inclination (deg)
2023-08-08	2.311/844	2.613	0.888	0.492	1.031
2023-10-07	1.776/648	2.051	0.887	0.396	9.977

All orbital elements in this table are referred to the ecliptic at the epoch of J2000.0

Physical and mitigation information

Days to closest approach	Cumulative impact probability	Composition	Rotation period (hours)
~ 0	Not applicable	Unknown	Unknown

Observational information

Peak brightness	Visual observability	Geometric observability
12.7	Professional Telescopes	Observable from most of the globe (where dark) during the incoming approach, but only from the Northern hemisphere right before and during closest approach. Unobservable due to low elongation afterwards.

Other information

Encounter peculiarities	Previous encounter	Next encounter
None	2016-12-12	Uncertain

Only encounters within 0.05 au are considered.

Asteroid ground track

The object is approaching from near the Equator. A few hours before close approach, it will fly over South-East Asia, reaching its peak brightness over Eastern Russia. Closest approach will happen over the Arctic ocean, not far from the Svalbard archipelago. The object will then head away towards the direction of the Sun, becoming unobservable.